MUSEUM STORIES FOR CHILDREN

Presented by

The James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures

Series XVIII, Number 1
February 27, 1932

FIELD MUSEUM OF NATURAL HISTORY
Roosevelt Road and Lake Michigan
CHICAGO

INDIAN HOUSES

When white people first came to live in North America, they found that houses of many kinds had been built by Indians of forest, plain, seaside, and desert. Generally, the Indians had used whatever materials were most plentiful and convenient in the regions in which they lived.

In the eastern woodlands, the common type of house had a frame of poles covered with sheets of bark from large trees, or with mats made of rushes. Such houses were called wigwams, and were of many shapes and sizes. Usually there was only one room, even when several families shared a house. Beds were made on platforms along the walls, and the fireplace was in the middle of the floor, with a smokehole in the roof above it. The Iroquois Indians had long wigwams with a door at each end. A passageway connected the doors, and the space on either side was divided into rooms, one for each family in the house. Fireplaces were in the middle of the passageway, one for each four families. The Iroquois called themselves People of the Long House.

Along the Missouri and Platte Rivers, large earth lodges were used by Indians who raised corn, beans and squashes, and who lived in the same place from year to year. An earth lodge had a strong frame of posts and beams, covered with earth and sod. Each house looked like a hill, or even, with smoke coming out of the hole in the roof, like a little volcano. The Wichita Indians of Kansas lived in dome-shaped houses of poles covered with a thatch of dried grass. The Wichita were farmer people, who traded with their hunter neighbors, exchanging corn and beans for meat and hides.

Most tribes of the western plains depended on hunting for their food. As they followed the buffalo herds from pasture to pasture, they needed shelters which they could take with them. These tribes used tipis. A woman who needed a new tipi first prepared buffalo hides for the cover. Then she invited her friends to an all-day sewing bee. The women had good times joking and telling stories as they sewed the hides together. A dozen or twenty long poles were set up for the frame. These were fastened together near the upper ends, with the lower ends spread out in a circle. The cover was fitted over the poles and fastened down the front, leaving holes above and below for smokehole and door. Such a skin tent could be easily and quickly set up and taken down, and was roomy and comfortable even in winter, when a small fire kept it warm. Many tribes who ordinarily lived in wigwams or earth lodges used tipis on hunting trips.

Along the north Pacific coast, high mountains rise steeply from the sea, their lower slopes covered with cedar forests. Indians of this region live in houses of cedar wood. Formerly, they cut the wood with stone adzes and chisels, and split planks with wooden wedges driven in with stone hammers, but now metal tools are commonly used. Many houses have inner frames of roof beams resting on stout posts. These posts are often carved and painted to represent animals, people, and spirits mentioned in stories about the families owning the houses. Tall totem poles, also carved and painted, stand in front of most houses.

In the dry, desert-like southwest, Navaho Indians live in hogans. A hogan is built of a frame of logs, plastered with adobe clay which dries hard in the sun. It looks so much like a little hill that a stranger may sometimes ride past in plain sight of one without seeing it at all.

Certain Indian tribes of Arizona and New Mexico live in apartment houses. Their villages are called pueblos. The houses are from one to four or even five stories high, and may have apartments for more than a hundred families. Parts of some houses are hundreds of years old, but new rooms are built on as they are needed. Walls are of stone and adobe clay, with wooden beams to support the nearly flat roofs. Most of the building is done by the women, who own the houses, but sometimes the men help. Ladders are used instead of stairs, and even the dogs of the pueblos can run up and down the ladders. The roofs are used as streets and as places for work and play.

Early explorers who traveled in different parts of America visited in many different kinds of Indian houses. But wherever they went, they found the first Americans ready to share their houses and their food, not only with members of their own tribe, but with strangers who came as friends.

JUNE WORK, Guide-lecturer

Note: In Halls 4, 5, 6, 7, and 10 you will find models of many types of Indian houses, as well as real dishes, samples of food, baskets, and other things used by Indians at home.

Save your Museum Stories. You will find them useful for looking up things you may want to know.

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STEPHEN C. SIMMS, Director

MUSEUM STORIES FOR CHILDREN

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The James Nelson and Anna Louise Raymond Foundation for Public School and Children's Lectures

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March 5, 1932

FIELD MUSEUM OF NATURAL HISTORY
Roosevelt Road and Lake Michigan
CHICAGO

LIFE IN A PRAIRIE-DOG TOWN

Ever since the first explorers crossed the Western Plains, Prairie-Dogs have been known. They are marmots and are first cousins of the Woodchucks and near-relatives of the Ground-Squirrels. Grown specimens are about fourteen inches long with stout bodies, long claws on the front feet and short, bushy tails. Their short, sharp bark gives them their name. Prairie-Dogs are found on dry plains from Kansas, west to the Rocky Mountains and from Mexico, north to Canada.

There are two groups of Prairie-Dogs. Black-tailed Prairie-Dogs have the tails tipped with black, live on the Great Plains and surround the entrance of their mounds with cone-shaped mounds of earth. White-tailed Prairie-Dogs, whose tails are tipped with white, live in the Rocky Mountain region in canyons and rocky places, pile the earth on one side of their entrances, live in scattered burrows and have shrill, chirping calls.

Prairie-Dogs are social animals found in colonies. These colonies or towns vary from a few yards to several hundred miles in area. The number of "yappers" living in a town varies from fifteen or twenty to many thousands. As the sun peeps over the horizon, the dwellers in a Prairie-Dog town come out of their burrows onto their mounds. First they sit up to look about for any enemy. If all is well, they run from burrow to burrow, to say "Good Morning"; then all scatter to the feeding grounds. When anything strange is first seen approaching, they gather in groups, as if to decide whether it is dangerous. If it approaches closer, usually one becomes alarmed and runs to his mound where he watches, very keenly alert. Suddenly jerking his tail once or twice, he barks his warning. At this, the groups break up and every Prairie-Dog races for his mound where, jerking his tail, he barks defiance before finally disappearing down his burrow. Ferrets, coyotes, badgers, hawks and eagles are the dreaded enemies of the "barkers."

The funnel-shaped mounds scattered over the plains are the entrances of the Prairie-Dogs' burrows. These mounds prevent water from running into the burrows when the ground is flooded, and serve as observation towers for the owners. They are kept in good repair and, after a rainstorm, the earth is dug and pushed back into place with the feet and packed down hard with the blunt nose. In the center of the mounds are the burrows which go almost straight down, for every Prairie-Dog burrow is a plunge hole for quick escape from danger. Each burrow drops down for about fourteen feet, then turns at a

sharp angle and runs along horizontally for several feet, rising toward the end. Opening off this passage are side branches, which end in storage chambers or nests. A little pocket is dug on one side of the steep entrance burrow, four or five feet below the surface. This is just large enough for one Prairie-Dog to hide in or turn around in and come back for a last look before finally going down to his nest.

Stems and roots of Gamma Grass are favorite foods of Prairie-Dogs, but they also eat insects and meat and do much damage to grazing land and cultivated crops. They destroy millions of dollars' worth of grass that would serve as food for cattle each year. They dig up corn, beans and potatoes and eat the roots and bark of peach, apple and pear trees. Since the grass and plants near their homes are soon eaten, they must go farther and farther away for food. This is dangerous as their enemies can catch them more easily; therefore after a time new burrows are dug near the food supply. All grass and vegetation is kept cut down or entirely dug out over much of the town. Especially is a circular clearing made about each entrance mound, in order that any approaching enemy may be seen. This habit is very harmful to cattle ranges and pastures as it kills the grass and often results in the washing away of the surface soil. As a result there is a constant warfare waged against Prairie-Dogs.

One of the common beliefs is, that Prairie-Dogs, Burrowing Owls and Rattlesnakes live together as a happy family in the burrows of the Prairie-Dogs. This is false. Rattlesnakes are the enemies of both the owls and the Prairie-Dogs, for they eat the eggs and young of the owls and eat young Prairie-Dogs. A great fear of the venomous rattlesnakes is held by Prairie-Dogs and when a "rattler" enters their burrows they quickly leave home and seek shelter elsewhere. The owls live and nest in deserted burrows. If they should enter burrows in which Prairie-Dogs are living, they would be killed.

As these interesting marmots come out during the day and are found in large numbers, they are easy to watch and study and have become one of the best known of our small animals.

GORDON S. PEARSALL, Guide-lecturer

Note: In Hall 15 may be seen two Prairie-Dogs in the rodent case.

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STEPHEN C. SIMMS, Director

MUSEUM STORIES FOR CHILDREN

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The James Nelson and Anna Louise Raymond Foundation
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March 12, 1932

FIELD MUSEUM OF NATURAL HISTORY
Roosevelt Road and Lake Michigan
CHICAGO

CHOCOLATE OR CACAO

Chocolate, either as a drink or as a sweetmeat, is familiar to almost every person throughout the world. Chocolate is not a new substance. It is as old as the ancient Incas and Aztecs of South America and Mexico. Today it is sometimes called the "Prince of sweetmeats."

Mention of "chocolatl," or the cacao tree from which it came, was made frequently in the old stories about Cortez and his conquest of Mexico. Montezuma, who was ruler of Mexico at that time, was especially fond of "chocolatl" to drink. It was said that he took no other beverage than "chocolatl" which was flavored with vanilla, honey and spices and beaten until it was covered with foam. Fifty golden pitchers of chocolate were served to Montezuma every day; two thousand more jars of it were prepared each day for his household. Montezuma drank the chocolate from golden goblets aided by spoons of gold or finely carved tortoise shell and each golden cup, after being drained, was tossed into a lake which surrounded a part of his palace. Many years later a great quantity of treasure was taken from that lake.

From one of the most sacred traditions of the Indians of Mexico came a story of the origin of cacao. The Indians believed its introduction to the earth was of a divine nature. Quetzalcoatl, God of the air, was given the mission to carry seeds of the cacahuacuahuitl or cacao tree to the earth. This cacahuacuahuitl was one of the few trees growing in Eden for the food and delight of the gods and the first sons of the Sun. The Indians believed Quetzalcoatl lived on earth for a time and taught the people how to raise and how to use cacao as well as many other wonderful things.

Ever since that time cacao has been very important in Mexico and South America. The beans have been used for money; they were the usual "small change" in Mexican markets and were used in some places until 1850. In the last few centuries the importance of cacao has spread until now great plantations exist in Africa, Trinidad and other tropical countries as well as Mexico and South America.

When cacao trees are three or four years old they begin to flower. The very small flowers are yellow or pale pink in color. They are delicate, star-shaped and have no fragrance. The blossoms grow in clusters from small cushions on the trunks and larger branches of the trees. It takes about four months for the blossoms to develop into fruits. As the trees bloom continuously, blossoms and fruits are found on the trees all through the year. If proper care is taken, a cacao tree will produce fruit for fifty years or more.

The fruits ripen into fairly large, brown, oval-shaped pods. These cacao pods are filled with twenty to forty valuable cocoa beans imbedded in soft, white pulp. Some of the pods are picked by hand but those that are high on the branches are carefully cut off with a knife fastened on the end of a pole.

The pods are split open, the beans removed and piled up to ferment. This fermentation destroys most of the pulp. Sometimes after fermentation the beans are washed. Drying is important since it prevents the beans from becoming mouldy and spoiling.

There are several different methods used for cleaning and polishing these dried beans. In a few places in South America the natives "dance" on the beans with their naked feet until the beans are absolutely free from any pulp and are brown and shiny. Red clay is sometimes mixed with the dried beans. This gives them a brighter and cleaner appearance.

When clean, the beans are ready to be packed and shipped to the manufacturers of chocolate products. There the outer shells are removed and the kernels taken out and roasted. Roasting produces a better color and takes away some of the bitter taste of chocolate. The kernels are put through grinding machines and come out in the form of a dark brown paste which is moulded into the cakes we call "bitter chocolate."

To produce the powdery cocoa, the kernels are ground up and put through a pressure machine which squeezes out about one half of the fat or cacao butter; thus cocoa is not as rich as chocolate.

The familiar candy bars usually contain about 45 per cent of chocolate and about 55 per cent of sugar, milk and flavoring material.

Because chocolate has a pleasant taste and is also stimulating and nourishing it is becoming more popular every year.

The great botanist, Linnaeus, was fond of a drink of chocolate; because of this, perhaps, he gave the cacao tree the dignified and fitting name of "Theobroma" which means "Food of the Gods."

MIRIAM WOOD, Guide-lecturer

Note: At the south end of Hall 29 you may see a cacao tree with flowers, green and ripe fruits and cocoa beans.

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STEPHEN C. SIMMS, Director

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FIELD MUSEUM OF NATURAL HISTORY
Roosevelt Road and Lake Michigan
CHICAGO

One of the finest of Old World game birds is the Bustard. It is a relative of the Crane and is found on dry, open plains in Europe, Africa and Asia.

Bustards are large birds with long necks, long bare legs and three toes on the feet. Moving about in the early morning and evening, they feed on insects, fruits, berries, lizards and snakes. During the day they hide in the long grass. Bustards are not easy to approach because they are wild and wary and, when alarmed, sneak through the grass with their heads held low or run away very swiftly, flying only when the danger gets too close.

One of the interesting habits of Bustards is the "showing off" of the males before the females during the mating season. Puffing out their throats, throwing back their heads and necks, spreading and raising the tail like a fan over their backs and extending the ruff of long display plumes on the breast, the males approach the females with a slow and measured walk, side-stepping and turning around and around, accompanying this performance with a deep booming or humming sound.

The Great Bustard is the largest European bird. It is now very rare and is strictly protected at all times. The male has tufts of whisker-like feathers on the cheeks and a throat pouch that is blown up during the mating "show-off." The largest of the African bustards is the Kori Bustard, which is the noblest and finest of African game birds. It wears a crest, the head and neck sway backward and forward as it walks and it has a long, slender body.

Quite different from the bustards are the vultures. These large birds are related to the hawks and eagles. Vultures are very ugly, except when flying, for their heads and necks are naked or covered only with down, the feathers have a rough and disorderly appearance and their habits are disgusting for they feed mostly on spoiled food and decayed flesh. They are generally protected because they do a great deal of good by eating decayed things which would otherwise cause sickness and disease.

Vultures are famous for their wonderful flight and very keen eyesight. By making use of air currents, they will rise for thousands of feet and on outstretched, motionless wings soar for hours at a time, sailing in spirals up in the sky until out of sight, never once flapping their wings. The way in which vultures gather quickly where food is

seen is one of the wonders of the bird world. Where a moment before not one was seen either in the sky or on the earth, suddenly they appear. Flying at a great height, they soar in wide sweeping circles. The minute one sees food, down he swoops, dropping straight to the spot. He is seen by the vulture soaring next to him and down he goes. If one drops, others are seen shooting in long slants toward the spot until all the vultures in the air for miles around have gathered at the feast. By swooping within a hundred yards of people or animals, vultures can tell whether they are asleep or dead. If the person or animal is asleep the birds sail away, but if dead, they drop straight to the spot.

Vultures were sacred to the Sky Goddess Nut in ancient Egypt and were sometimes mummified and placed in the tombs. Many pictures of vultures were found on the tomb walls.

Vultures are particularly common in Africa, the commonest of them being the small Hooded Vulture. The White-backed Vulture, which breeds in colonies, is also common. The White-headed Vulture is a handsome study in black and white, while the Griffon Vulture is the one commonly pictured on the monuments in Egypt. The Bearded Vulture of Europe and northern Africa is a connecting link between the vultures and eagles. The American vultures belong to a different family from the Old World vultures. The Condor is a vulture and the world's largest bird of prey. Black Vultures and Turkey Vultures are common in the Americas.

An old Egyptian legend tells why vultures have featherless heads and necks. "King Solomon was traveling during the heat of the day and the sun was burning him. Seeing a flock of vultures he asked them to fly between him and the sun to protect his head and neck. When they refused he placed a curse upon them and declared that the feathers on their heads and necks should fall off and expose their heads to sun, rain and cold and that from that time on they should eat only carrion and be impure until the end of the world. And it has been so ever since."

GORDON S. PEARSALL, Guide-lecturer

Note: In Hall 20 is a habitat group of the California Condor, and in Hall 21 may be seen the Great Bustard, Bearded Vulture, Condor and King Vulture.

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FIELD MUSEUM OF NATURAL HISTORY
Roosevelt Road and Lake Michigan
CHICAGO

DEERSLAYER, THE MOUNTAIN LION

The Mountain Lion is the best known member of the cat family in America. It is a slender-bodied, graceful animal with a round head and long, thick tail. The color of its coat varies from a sandy-brown to slate-gray above, shading to dull white on the underparts. It has a number of names: the most common are Cougar, Puma, Panther, Catamount, Sneak-Cat, Horse-Thief and King-Cat. It is called Mountain Lion because it looks something like a lioness, but Cougar is the preferred name.

No other American animal has as wide a range as the Cougar. It has been found from the Atlantic coast to the Pacific and from the southern tip of South America to southern Canada. It was formerly found in every part of the United States, but today, it is rare east of the Rocky Mountains. West of the "Rockies" it is still common. Despite the fact that it lives in different kinds of climates and under different conditions, its appearance and habits are much the same wherever it is found. It is a great wanderer, traveling many miles at night in search of food, new hunting grounds or a mate.

To the early settlers, the Cougar was a cunning, ferocious animal and many bloodcurdling tales were told about it. Now, it is known that the Cougar is one of the shyest and most silent of all large animals. No animal is so rarely seen or so difficult to find. It has the habit of following and watching humans for miles, either out of curiosity or not daring to attack. It is ordinarily very much afraid of man and when surprised attempts to flee and even when hunted shows itself to be a coward. It has learned that man is a dangerous enemy.

The favorite haunts of the Cougar are rugged mountains with forests in which deer are plentiful, or half-wooded country in which there is plenty of game. It spends the day sleeping on a ledge or in a thicket. As darkness descends, it wanders across the flats and along ridges, in search of food and adventure. It is the king of the American big game hunters.

When it gets an animal's scent, the Cougar begins to approach slowly upwind so as to give no warning of its coming. Gliding like a shadow, it steals silently forward. When as close as it can get without alarming its prey, it chooses a ledge, rock or rise of ground from which to spring. It tries the footing for each paw, then hurls itself at its prey. With one or two great bounds it lands on the animal, knocking it to the ground. One mighty paw jerks back the victim's nose until its neck is broken, then the body is dragged to shelter and the Cougar settles down to its feast. But the Cougar does not always get its

prey; in fact, it often misses for the animals which it hunts are alert and wary.

In a cave or sheltered place among the rocks, thicket or cane-brake, a bed of grasses, leaves and sticks is made in which the young are born. When the kittens are small they are covered with fine yellow-brown hair spotted with black. This coat is kept until they are about six months old. The mother is very devoted to her babies. She guards them and plays with them much of the time, leaving them only long enough to get something to eat. At this time she will attack anything she thinks may harm her kittens.

Although generally harmless to humans, the Cougar is a killer, and because of its destructiveness to large game animals and live stock, is everywhere an outlaw with a price on its head. Deer are its favorite prey and where they are common, they form its chief food. It is estimated that a Cougar kills two deer a week. This great cat is also the dreaded enemy of pigs, sheep, calves and colts and when very hungry will kill cattle, horses, elk and moose. It is especially fond of young horses and in some parts of the West, horses cannot be raised because of the raids of Cougars.

Hunting the Cougar is rough, exciting sport. Without the aid of dogs, hunting this sneaking cat would be impossible. The Cougar has a great dislike and fear of dogs and sometimes a single little cur will send a Cougar up a tree. Of the dogs used in Cougar hunting, some are hounds, who follow the Cougar's trail until it is cornered or "treed." They announce this fact by their barking. Trailing along with the hunters are heavier fighting dogs, whose business it is to rush to the spot where they hear the hounds barking "treed." They do most of the fighting, if there is any. Often the Cougar stays in the tree, allowing itself to be shot in the tamest manner. Sometimes when the hunters come up, it jumps from the tree and tries to flee. As it retreats it fights the dogs, until cornered again and is finally killed.

GORDON S. PEARSALL, Guide-lecturer

Note: In Hall 16 is a group of Mountain Lions, showing a mother playing with her kittens. A male Mountain Lion is shown in Hall 15 in a case with other kinds of American cats.

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FIELD MUSEUM OF NATURAL HISTORY
Roosevelt Road and Lake Michigan
CHICAGO

GREENLAND

Far to the north lies Greenland, the largest island in the world. Today, that land is covered with great glaciers which creep slowly down the fjords between the high, rocky cliffs of the jagged coasts and, breaking loose from the parent masses, sail out into the northern seas as stately icebergs.

Once upon a time, that great island was a land of warm sunshine and balmy breezes. In its forests grew trees like those found in California and the southern part of our own country; in its marshes grew horsetails, club-mosses and magnificent ferns; and in its warm waters lived crinoids, mussels and fishes similar to those to be found in tropical waters today.

After a while the climate changed. The balmy winds gave way to bitter blasts which either killed the moisture-loving plants and animals or drove them far to the south. Such plants as remained in the marshes in time turned to coal. Many of the animals of that period can be found as fossils.

Ages passed and gradually new kinds of plants which could stand the intense cold and snow for eight or nine months of the year came upon the land. Then animals with thick coats of fur or with layers of fat under their leathery coats found Greenland a good place in which to live, and made it possible for the Eskimos to live there. In time people from Denmark arrived and built settlements and helped the Eskimos to build up a wonderful fishing industry.

Because of the fierce winds and dry blowing snows of the interior few people try to cross the island. The villages are located along the coasts and are interesting places to visit. In summer, young and old alike are engaged in fishing or preparing the fish for market. From May to November ships anchor in the harbors and unload quantities of lumber, foods and materials to make way for the mineral and animal products to be shipped to other lands. One of the chief exports is cryolite, a mineral which is found in large quantities in no other land, and which is used in our own land for the making of aluminum articles. In places the coal beds are 1,000 feet thick, but it is so difficult to mine that it is not used. Graphite is burned in some places. Soapstone is mined in large amounts. Dishes and lamps are made of this mineral.

Where the Danes have settled the villages have churches, schools and houses made of imported wood and native stone. Always there is a minister, a doctor, a school-teacher and a carpenter to look after the needs of the people. In the Eskimo settlements, the houses may be a mixture of turf with wooden roofs or turf and stone structures.

Always they are low with long narrow passageways leading into the only room. Many of the Eskimos have married into Danish families and they are known as the Greenlanders. Such Eskimos attend the schools and take part in the government of the island. They publish papers in their own language, are interested in business and the affairs of the outside world. Many villages now have radio stations.

Eskimos who do not live in the settlements wander from place to place hunting for seals, whales and walruses. Their igloos are made of blocks of snow and ice. During the summer they collect berries and grasses. The grasses are used for beds and also for stockings. The summer season is very short, but the sun shines all night as well as all day, so plants are forced to grow. Even in Umanak, one of the most northerly villages in the world, there are ten or eleven weeks of growing weather. Then broccoli, radishes and turnips are raised.

When winter comes and lamps must be lighted even at noon, the Eskimos gather in the igloos. It is then the parents teach the children the songs and dances which all Eskimos love. It is also a time for preparing animal skins for clothing. Light weight skins must be made into summer garments, and soft bird and fox skins fashioned into jackets and trousers for the girls and women. Some of the dark hours may be spent in making eiderduck garments to be sold, or in carving pictures on walrus tusks or bits of bone. Eskimos are happy people. It is said an Eskimo laughs more in three months than a white man does in a whole year. At any rate they like their way of living and do not care to travel to other lands.

To them the land which lies mostly north of the Arctic Circle is the greatest of all lands. When the arctic poppy blooms and a few bumblebees and butterflies flit from flower to flower, and the mosquitoes and gnats become unbearable, they rejoice, for then the whales, sharks, walruses, cod and halibut come into the near-by waters and can be caught. When the waters no longer provide a living they hunt for the polar bear, muskox and fox.

This then is the land where Eric the Red landed so long ago, where the Danes have established colonies and where the Eskimos thrive.

MARGARET M. CORNELL, Guide-lecturer

Note: In Hall 10 may be seen clothing of men, women and children, drums, a sled equipped for seal-hunting, a harpoon with narwhal horn point, bows and arrows and other Greenland objects.

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FIELD MUSEUM OF NATURAL HISTORY
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CHICAGO

THE MAYAS

The early homes of the Maya Indians were in the forests of Central America and of Chiapas, the southernmost state of Mexico. The Mayas were farmers, and the rich soil of that region repaid their hard work with fine crops of corn, cacao, vegetables, and cotton. Becoming rich and powerful, they built towns and cities. Chiefs and priests lived in stone houses, while the thatched dwellings of the common people were mostly of wood. Splendid stone temples were built for the gods of rain and of growing things, and the other gods in whom the Mayas believed. Priests studied the sun, moon, and stars, and worked out a calendar in which each year had eighteen months. There were twenty days in a month, and each day had its name. Five extra days finished out the year. The Mayas invented a kind of picture writing. They carved records in this writing on stone monuments.

Well-made roads connected the Maya towns. People traveled on foot, for they had no beasts of burden. Traders carried salt from city to city. Jewelry of gold, copper, jade, and shell, graceful pottery, fine cloth of cotton and fabrics of feathers, and other products of the work of Maya men and women were also traded. The commonest form of money was seeds of cacao, from which chocolate was made. Other things used for money were copper bells like our sleighbells, copper axe-blades, shells, and feathers.

Modern students are now searching out and studying the ruins of Maya cities. The oldest building they have found so far is at Uaxactun, in Guatemala. It is a pyramid of stone, covered with cream-colored stucco. A stairway leads up each of its four sides. On either side of each stairway are two great stone faces, probably representing gods of rain. Four holes in the top mark the posts of a wooden temple that once stood there. This pyramid, nearly two thousand years old, was found under the ruins of a larger one that had been built over it.

The students have not yet learned the meanings of all the picture signs they find carved on stone walls and monuments, but they can read the dates. The oldest dated monument so far found is at Uaxactun. The date is believed to correspond to our year 320. At Quirigua, in Guatemala, are many monuments, each a single standing stone. The tallest is thirty-five feet high. All are carved with figures of gods and with writing. The dates show that the Mayas of Quirigua had a custom of setting up a monument every five years. Perhaps some

of the writing may tell of important happenings during the five-year periods for which the monuments stand.

Copan, in Honduras, was by far the most important early Maya city. Sometimes councils were held there, to which delegates came from other towns. Apparently one such meeting was held on July 1, 763, for that date was carved on a number of monuments in Copan. One was made in the form of a square stone altar, its top covered with writing. Around the sides were sixteen seated figures of elaborately dressed men. Probably they represented some of the chiefs who came to Copan for the meeting.

After flourishing for centuries, the wonderful early empire of the Mayas came to a sudden end. The reason is not known, but it appears that by about the year 870 all their great cities had been deserted. Many of the people moved northward, into Yucatan. Here, new cities arose. The most important of these was Chichen Itza. One of the splendid temples there was built on top of a pyramid eighty feet high.

The Mayas were still a powerful people when they were discovered by Spanish explorers. In the long wars that followed, they fought bravely to keep their independence, but they were finally forced to accept the rule of the foreigners. Today, their descendants still live in Mexico and Central America. They still speak the Maya language, and live in thatched houses much like those formerly scattered around Copan and Chichen Itza. Many of the women make pottery, and some still weave cotton for their families' clothing. When they plant their corn and cacao, sometimes the men still pray to the gods of rain and of growing things—the great gods of the ancient Mayas.

JUNE WORK, Guide-lecturer

Note: In Hall 8 are large casts of Maya monuments, a small model of the pyramid at Uaxactun, and pictures of famous monuments and buildings. At the east end of the hall you will find pottery and ornaments of the ancient Mayas. At the west end are clothing, dishes, and other articles made and used by modern Mayas. Notice especially the photographs showing Maya men and women of today.

Save your Museum Stories. You will find them useful for looking up things you may want to know.

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It is free to adults on Thursdays, Saturdays, and Sundays.

STEPHEN C. SIMMS, Director

MUSEUM STORIES FOR CHILDREN

Presented by

The James Nelson and Anna Louise Raymond Foundation
for Public School and Children's Lectures

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FIELD MUSEUM OF NATURAL HISTORY
Roosevelt Road and Lake Michigan
CHICAGO

Fort Dearborn was built in 1804, on land given to the United States government by the Potawatomi Indians. These Indians had had a village at Chicago for more than a hundred years, but they had not always lived in Illinois. French explorers had first found Potawatomi in northern Wisconsin. But Wisconsin became crowded with Indians of other tribes; so many Potawatomi families moved south and settled around the southern end of Lake Michigan. In later years these were known as Prairie People, while those who remained in the Wisconsin forests received the name of Forest Potawatomi. The Ojibwa, Ottawa, and Potawatomi Indians all say that their three tribes once formed one people. In their ways of living they were much alike, and much like their neighbors of the Sauk and Fox, Menominee, and Winnebago tribes.

During the summer the Potawatomi lived in large square wigwams covered with bark, with a sort of porch outside, in which the women did much of their work. The wigwam door always faced east. There were no windows, only a smokehole in the roof over the fireplace. The Potawatomi called fire "our grandfather." They said it was human, and that it had been with people since the making of the world, to cook for them, keep them warm, and be company for those who were left alone.

Early explorers have told of the splendid dress and fine appearance of the Potawatomi. Formerly, they dressed in skins of animals, decorated with paint and porcupine quills. Later they used cloth and beads bought from traders. Men's and women's clothes were decorated with patterns made by sewing on pieces of silk of different colors, or with beautiful beadwork designs of flowers and leaves. Although they did not weave cloth for clothing, the women wove fine bags of bark fibers, nettle fibers, and hair of the buffalo and other animals.

The women raised corn, beans, squashes, and melons in their gardens, and prepared maple sugar and other foods from wild plants. Most of their dishes and spoons were of wood, but in early times they also made pottery. Later they bought kettles and pots of metal from white traders. They prepared corn for cooking by pounding it in a mortar made by hollowing a block of wood. In midsummer they gathered reeds to make the pretty mats used as wall and bed coverings. The reeds were boiled in dyes made from bark, roots, leaves, and berries,

to color them black, yellow, green, and red. In weaving mats, very large bone needles, made of deer's ribs, were used. Coarse rushes, gathered in the fall, were used to make large plain mats. These covered the round wigwams in which the Potawatomi usually lived in winter.

The men hunted and fished all the year round. In summer they often traveled in dugouts or in bark canoes. In winter snowshoes helped them to follow their game swiftly. From the white men they learned to use horses, which they rode bareback, or on saddles without stirrups. In hunting, different kinds of arrows were used for different kinds of game. For large animals sharp points of stone were made. Small game was often shot with arrows having blunt wooden points. Such arrows were also used for target practice.

During the War of 1812, most of the Potawatomi took sides with the British. Some of them, however, were friendly to their American neighbors at Fort Dearborn. When the Americans left the fort, hoping to reach a safer place, they were attacked by fierce Potawatomi warriors. Probably they would all have been killed, if it had not been for Black Partridge and other Potawatomi friends. With the help of these kindly Indians, most of the women and some of the men were saved.

After the war, many settlers moved into Illinois, and the town of Chicago sprang up and grew rapidly. Soon there was no room for the Indians. The Potawatomi gathered at Chicago in 1835 to say good-by to their old home. After a last war dance through the streets of the town, most of them went to reservations across the Mississippi. Today there are members of the tribe living in Canada, Wisconsin, Iowa, Kansas, and Oklahoma. The Forest Potawatomi still keep up some of their old customs, but most of the Prairie People have adopted the white man's ways. Many of them have become prosperous citizens.

JUNE WORK, Guide-lecturer

Note: In Cases 13, 14, and 15 of James Nelson and Anna Louise Raymond Hall (Hall 4) are clothes, dishes, and other objects made and used by Potawatomi Indians. Near them are many exhibits of tribes whose ways of living were much like those of the Potawatomi.

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STEPHEN C. SIMMS, Director

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FIELD MUSEUM OF NATURAL HISTORY
Roosevelt Road and Lake Michigan
CHICAGO

THE EUROPEAN CUCKOO

In Europe, the people welcome back the Cuckoo bird from its winter in Africa because of its sweet song and because it is usually associated with all that is delightful in the return of spring. The familiar call is the song of the father bird. This lovely spring song is heard in the day and often at night.

Poets and prose writers have frequently mentioned this peculiar bird. Superstitions and folk-lore are full of stories of strange cuckoo actions. One superstition regarding the cuckoo is the belief started by the ancients that the bird changes into a hawk in the winter. This myth originated probably through a resemblance of the cuckoo to the English Sparrowhawk.

The European Cuckoo is a rather large bird with grayish-brown feathers and a long tail. As it flies, it darts about, just as the dreaded sparrowhawk does. This imitation of a much larger and fiercer bird aids in frightening the smaller birds.

The most interesting thing about this cuckoo to nature-lovers is its method of egg-laying, often called the "cuckoo's secret." The mother bird never builds a nest. Our own familiar cowbird has the same lazy habit. The mother European Cuckoo picks out a suitable nest for depositing her egg, usually choosing the nest of some smaller bird such as the Tree or Meadow Pipit, Hedge-Sparrow, Reed Warbler or Pied Wagtail. Then in some near-by tree or bush, she takes up her silent watch of the chosen nest and its owners. Sometimes she watches quietly for several days before she finally places her egg in the nest of the foster parents. Usually she waits until the parents leave the nest or are frightened away before she deposits her egg. When possible, the mother cuckoo lays her egg directly in the nest. If the nest is too small for such a large bird to enter or perch on even for a few seconds, the mother lays her egg on the ground and then carries it in her bill to the small nest.

When the mother cuckoo adds her egg to those that rightfully belong there, she usually removes one of the proper eggs to make room for her own egg. It is believed that she eats this extra egg or in some other way destroys it.

After getting rid of her own egg, the mother cuckoo goes on her way for a few days rejoicing and singing with the other cuckoos. In this playtime she searches for hairy caterpillars to eat. The mother's song is not a "cuckoo" call as is the father's, but a low bubbling sound.

During the months of May and June the mother lays sometimes as many as twenty eggs in twenty different nests. This task finished, the cuckoos soon start on their long trip south to Africa. Only the adult or old birds fly south at this time. They are not often seen during the journey since they fly at night.

The cuckoo's eggs are small for such a large bird, but even so they are usually larger than the eggs with which they are placed. They vary in color from a mottled greenish-blue to a dull reddish-gray. No doubt some of the cuckoo eggs are destroyed by the foster parents but many times the unsuspecting foster mother keeps the large egg warm and treats it as if it were her own.

When the young cuckoo hatches into this world it is a very ugly, blind baby having no feathers and a peculiar flat back. Very soon this baby starts to make more room for itself. If the other eggs are hatched, the blind cuckoo hoists these babies one at a time onto its own flat back and heaves them overboard from their rightful nest onto the ground to die. If, by chance, the other eggs have not hatched the cuckoo has an easier time pushing them out of the nest.

Thus the cuckoo baby makes itself king of the nest. Two foster parents bring food and care only for this one large baby. It demands a great amount of attention and does not seem to be able to care for itself for a month or more.

The young cuckoos, scattered in many nests, are able to fly south in September or later. Then occurs one of the miracles of nature. These young birds, with no experience or guide, follow the same route to Africa that their parents took several weeks before. Arriving in Africa, they spend the winter with the older birds. In April, all the cuckoos fly back north for a short but happy mating season.

Our own cuckoos in North America are different in many ways. Here each mother bird builds a nest and takes care of her own young. The song of the American cuckoo does not in any way resemble the "cuckoo" call in England. Our cuckoo's call is a low croaking sound that is often heard just before a rain. Thus the bird is commonly called a "Rain Crow."

MIRIAM WOOD, Guide-lecturer

Note: In Hall 21 you may see a European Cuckoo and an English Sparrowhawk.

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STEPHEN C. SIMMS, Director

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FIELD MUSEUM OF NATURAL HISTORY
Roosevelt Road and Lake Michigan
CHICAGO

DESERT LIFE

Plants and animals of the deserts are quite different from those that are found in moist regions, where there is plenty of rain.

The heaviest rainfall of the Arizona deserts comes in July and August; some falls in December and January. The yearly amount varies from three to twelve inches. So irregular is it, however, that an entire year may pass without a single shower, and twice at Yuma, Arizona, more rain has fallen in twenty-four hours than would ordinarily fall in an entire year. So dry is the desert air that shortly after a rain most of the water has evaporated into the air. Hence plants must be suited to such climates.

In the first place, they must be able to live on very little water; secondly, they must be able to protect what water they do have from too rapid evaporation; thirdly, they must be able to live when no water is to be had. When the thermometer goes very high the plants must be able to stop all growing until the heat has lessened.

As the sun draws the moisture up through the plant canals, it also brings up food from the roots. For every pound of solid matter which an ordinary plant gains it must lift from its roots one thousand pounds of water which is lost in the air. Desert plants cannot have that kind of force, but they do have a tremendous sucking power with which to obtain the water.

To keep from losing the little water they do get desert plants have almost no leaf surface for the sun to draw from. In the cacti the leaves are reduced to mere spines. In the yuccas and agaves the leaves are so thickened as to defy evaporation. Some plants are covered with a fuzz, while others have a layer of waxy material on the surface which lessens the chances of evaporation.

Desert plants have also developed some of their tissues into reservoirs for saving water collected after rains. The barrel-cactus, tree-cactus and some other cacti can accumulate enough water in this manner to serve for two or three years of no rainfall. If a person on a desert needs water badly, he can break off the top of such plants, pound up the tissue, squeeze out the water and drink it. It is cool and refreshing.

For protection against animals most desert plants have developed spines or thorns.

Like the plants of the deserts, the desert animals must live on a scanty water supply. Most of them are able to live for long periods of time on only the water found in the plant material on which they feed. Were they not able to do this, they would have to leave the

deserts during the long, dry periods or perish of thirst. They can also eat plants whose juices are too bitter for most animals.

Strange as it may seem there are many animals on the deserts of Arizona. The rodent family is represented by such members as rats, mice, chipmunks and ground-squirrels. The mammals are jack rabbits, coyotes, foxes, deer and antelopes. Occasionally a peccary is seen, while lizards, snakes and bats are common. Interesting birds to be seen are mockingbirds, road runners, wrens, thrashers, orioles, sparrows and hawks.

The horned toad is familiar to most people. It really is not a toad at all, but a lizard. Its body is covered with short, sharp spines which prevent snakes from swallowing such dainty morsels. During the day when the heat of the sun is most intense these little, flat fellows dart hither and thither catching insects. When the sun begins to sink in the west they dig down into the sand and spend the cool hours of the night under a thin blanket of sand. Horned lizards make excellent pets when provided with screen cages, several inches of building sand, plenty of dry air and sunshine, and proper food. They will live for a long time in captivity, especially if fed upon ants. Of all the insects eaten, ants are the favored food.

Quite different is the gila monster, the only poisonous lizard. This animal is striped with black and pink or yellow and has a vicious temper when living in the wild state. During the season when it can get plenty to eat it develops a long, fat tail. During the dry season it absorbs the food in that tail. For protection it has no sharp spines as has the horned lizard, but does have a grasp like that of a bulldog, if one puts the hand too close. Once its fangs, which are in the lower jaw, are imbedded, it also has poison to inject into the wound made. It always announces its anger by a hissing sound. It is the poison which puts the gila monster in the class of animals dangerous to man. A strange thing is that when confined in cages they become gentle and will even allow themselves to be handled, seldom thrusting out the forked, purple tongue.

Desert animals and plants, you see, are well constructed to take care of themselves.

FRANKLIN C. POTTER, Guide-lecturer

Note: In Hall 29 you will find the desert plants, such as sage, tumbleweed and cacti; in Halls 15, 16 and 18 are shown desert rodents, mammals and reptiles.

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